

**REMARKS**

Claims 1, 5, 7, 8, 10-13, 16, 18, 19, 24, 25, 27, 28 and 30-52 are currently pending in the subject application and are presently under consideration. Claims 11, 19 and 30 have been amended as shown on pages 2-8 of the Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

**I. Rejection of Claims 11-13, 16, 18, 19, 24, 25, 30-33 and 45-52 Under 35 U.S.C. §102(b)**

In the Final Office Action dated May 16 2008, claims 11-13, 16, 18, 19, 24, 25, 30-33 and 45-52 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kanevsky, *et al.* (US 6,421,453). Withdrawal of the rejection is requested for the following reasons. Kanevsky *et al.* fails to disclose or suggest all aspects set forth in the subject claims.

A single prior art reference anticipates a patent claim only if it **expressly or inherently describes each and every limitation set forth in the patent claim**. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 USPQ2d 1597 (Fed. Cir. 2002); *See Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The **identical invention must be shown in as complete detail as is contained in the ... claim**. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989) (emphasis added).

The claimed subject matter relates to a system for controlling a computer using gestures. A 3-D imaging component performs gesture recognition and interpretation based on a previous mapping of a plurality of hand poses and orientations to user commands for a given user. Gestures captured from a user are stored and each of the gestures is associated to a particular user selected command that manipulates on-screen objects that control a computer or a device connected to the computer. The system subsequently captures a gesture of the user, compares it to the previously stored gestures and executes the mapped user commands to control the computer. Further, the system allows different users to select different commands to associate with a received gesture. In particular, amended independent claim 11 recites *a system that facilitates a user interface in a medical environment, comprising: a user command to control an*

*object of a computer system received as a gesture, wherein the object is a device connected to the computer or an application running on the computer; a 3-D imaging component that captures the gesture in the form of a gesture image, processes the gesture image, and interprets the gesture image to execute the user command for control of the computer system, the imaging component permits user selection of association of gestures with user commands wherein different users employ different gestures for execution of a given command, the association being determined during execution by user profile; and a wireless control device worn by the user, comprising sensors that measure orientation of the device, the orientation information utilized to determine selection of the object, the gesture utilized to control the object of the computer system.* Kanevsky *et al.* is silent regarding such novel features.

Kanevsky *et al.* relates to a method and apparatus for user recognition to grant access to authorized users to one of a computer, a service and a facility. At the cited portions, Kanevsky *et al.* discloses processing the same command from multiple users, wherein the command has a different meaning to each of the users. The system disclosed by Kanevsky *et al.* films the gestures of an individual, matches it against a users pin database and verifies if the gesture matches the stored gesture. The result of this verification is applied to a grant/deny entry system that operates the door. Nowhere does Kanevsky *et al.* disclose *the imaging component permits user selection of association of gestures with user commands*. Rather, the system associates a gesture pin from a user with a user command of opening the door, and associates gesture pins from different users with a user command of opening the door. This is not permits user selection of association as any user selected gesture can be associated only with a single user command, of allowing access to a facility. In contrast, the claimed invention allows for user selection of associating a plurality of gestures with a plurality of user commands. Thus, Kanevsky *et al.* is silent regarding *the imaging component permits user selection of association of gestures with user commands* as recited by independent claim 11.

Further at the cited portions, Kanevsky *et al.* discloses a gesture pin that consists of a gesture in which the user displays a proof of possession such as an ID card. Nowhere does Kanevsky *et al.* disclose *a wireless control device worn by the user, comprising sensors that measure orientation of the device, the orientation information utilized to determine selection of the object, the gesture utilized to control the object of the computer system*. Rather, the ID card is only used as part of the gesture pin that verifies the identity of the user. In contrast, the

claimed invention discloses a wireless device worn by the user, the device comprises sensors that transmits orientation signals to a receiver in the computer, the orientation of the device is used to determine if the device is being pointed at an object in the operating room environment that is controllable by the computer system, which information determines the object is selected and the gestures of the user are utilized to control the selected object. Thus, Kanevsky *et al.* is silent regarding *a wireless control device worn by the user, comprising sensors that measure orientation of the device, the orientation information utilized to determine selection of the object, the gesture utilized to control the object of the computer system* as recited by independent claim 11.

Amended independent claims 19 recites *permitting different users to select different gestures, for execution of a user command selected from a plurality of commands on the computer system*. Independent claim 30 recites similar features a independent claim 19, namely *mapping the gesture data to at least one user command selected from a plurality of user commands that is executable by the computer system*. Nowhere does Kanevsky *et al.* disclose such novel features. At the cited portions, Kanevsky *et al.* provides for gestures of different users captured in an enrolment session, and stored in a database. The gestures are utilized to recognize the individual, wherein on recognition the user is allowed access to a computer/facility/service. However, Kanevsky *et al.* does not provide for letting a user select a command from a plurality of commands and map it with a previously captured gesture, and hence is silent regarding *permitting different users to select different gestures, for execution of a user command selected from a plurality of commands on the computer system* as recited by independent claim 19.

Independent claim 33 recites *mapping the gesture calibration data to at least one user command that is executable by the computer system; associating the mapped gesture calibration data with a user profile of a user, wherein different users are allowed to select different commands to associate with the received gesture*. Kanevsky *et al.* is silent regarding such novel features. At the cited portions, Kanevsky *et al.* provides for gestures of different users captured in an enrolment session, and stored in a database. The gestures are utilized to recognize the individual, wherein on recognition the user is allowed access to a computer/facility/service. Nowhere does Kanevsky *et al.* disclose *different users are allowed to select different commands to associate with the received gesture*. Rather, different users are allowed to select different

gesture pins that are associated with a single user command of opening a door. Thus, Kanevsky *et al.* is silent regarding the aforementioned features recited by independent claim 33.

Dependent claim 48 recites *the 3-D imaging component further comprising processing subsequent gesture images to interpret the gesture for manipulation of the object*. At the cited portions, Kanevsky *et al.* discloses multiple users giving a command to the computer, the user recognition system recognizes the users and their rankings and the command given by the higher ranking user being executed. Thus, Kanevsky *et al.* discloses the user recognition feature of the system. Nowhere does Kanevsky *et al.* disclose *the 3-D imaging component further comprising processing subsequent gesture images to interpret the gesture for manipulation of the object*. In contrast, the claimed invention provides a wireless device selecting an object for manipulation, the imaging component to process subsequent gesture images from the user, interpret the gestures and accordingly manipulate the object. Thus, Kanevsky *et al.* is silent regarding aforementioned features recited by claim 48.

In providing for a user to select a particular command to associate with a captured gesture, the system allows different users, who may prefer to make different motions for a selected command, the ability to tailor the system in a way most efficient for their personal use.

Accordingly, it is requested that this rejection with respect to independent claims 11, 19, 30 and 33 (and the claims that depend from) should be withdrawn.

## **II. Rejection of Claims 1, 5, 10, 27, 28, 34, 39-44 Under 35 U.S.C. §103(a)**

In the Final Office Action dated May 16 2008, claims 1, 5, 10, 27, 28, 34, 39-44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kanevsky in view of Oohara, *et al.* (US 5,801,704). Withdrawal of this rejection is requested for the following reasons. Kanevsky *et al.* and Oohara *et al.*, alone or in combination, fail to disclose or suggest all aspects set forth in the subject claims.

The claimed subject matter relates to a system for controlling a computer using gestures. In particular, independent claim 1 recites *a 3-D imaging component that captures the gesture in the form of a gesture image, processes the gesture image, and interprets the gesture image to execute the user command for control of the computer system and the imaging component permits different users to select different commands to associate with the received gesture such*

*that the received gesture executes a user command based on user profile.* Kanevsky *et al.* and Oohara *et al.*, alone or in combination, fail to disclose or suggest such novel features.

Kanevsky *et al.* relates to a method and apparatus for user recognition to grant access to authorized users to one of a computer, a service and a facility. At the cited portions, Kanevsky *et al.* discloses performing a user verification by filming the gestures of an individual, matching it against a users pin database and verifying if the gesture matches the stored gesture. The result of this verification is applied to a grant/deny entry system that operates the door. Nowhere does Kanevsky *et al.* disclose *the imaging component permits different users to select different commands to associate with the received gesture such that the received gesture executes a user command based on user profile.* Rather, gesture pins of users are captured and compared to gesture pins in a storage of a user verification system, on a match occurring the user is allowed access to a facility. In contrast, the claimed invention provides for a plurality of user commands from which a user can select a command to map a particular gesture pin, select another command for a second gesture pin etc. Further, the claimed invention allows different users to map their individual gesture pins to the same selected command. Thus, Kanevsky *et al.* is silent regarding *the imaging component permits different users to select different commands to associate with the received gesture such that the received gesture executes a user command based on user profile* as recited by independent claim 1.

Oohara *et al.* relates to a method of image processing for processing an object by detecting movement of hands and fingers of an operator. At the cited portions, Oohara *et al.* discloses an operator selecting functions by performing the gesture that corresponds to the function, displayed in an instruction action form. However, Oohara *et al.* is silent regarding *the imaging component permits different users to select different commands to associate with the received gesture such that the received gesture executes a user command based on user profile* as recited by independent claim 1.

Claims 5, 10, 27, 28, 34, 39-44 depend from independent claims 1, 19 and 33. As discussed supra with respect to independent claim 1, Kanevsky *et al.* and Oohara *et al.*, alone or in combination, fail to disclose or suggest novel features recited by independent claim 1 (and claims 5 and 10 that depend therefrom).

As discussed supra with respect to independent claim 19 and 33, Kanevsky *et al.* fails to disclose all features recited by the subject claims. Oohara *et al.* relates to a method of image

processing for processing an object by detecting movement of hands and fingers of an operator, but does not make up for the deficiencies of Kanevsky *et al.* with respect to independent claims 19 and 33.

In view of the above, it is clear that Kanevsky *et al.* and Oohara *et al.*, alone or in combination, fail to disclose or suggest each and every feature recited by the subject claims. Accordingly, it is requested that this rejection with respect to independent claims 1,19 and 33 (and the claims that depends from) should be withdrawn.

### **III. Rejection of Claims 35-38 Under 35 U.S.C. §103(a)**

In the Final Office Action dated May 16 2008, claims 35-38 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kanevsky in view of Hildreth, *et al.* (US 7,227,526). Withdrawal of this rejection is requested for the following reasons. Claim 35 depends from amended independent claim 33. Independent claim 36 recites similar features as claim 33, namely *means for returning a computer command associated with the recognized gesture, wherein different commands are returned associated with different users for the received gesture*. Claims 37 and 38 depend from claim 36. As discussed *supra* with respect to independent claim 33, Kanevsky *et al.* fails to disclose or suggest *different users to select different commands to associate with the received gesture*. Hildreth *et al.* relates to an image processing system for processing stereo image data. However, Hildreth *et al.* is silent regarding permitting *different users to select different commands to associate with the received gesture* as recited by the subject claims and fails to make up for the aforementioned deficiencies of Kanevsky *et al.* Accordingly, it is requested that this rejection with respect to independent claims 33 and 36 (and the claims that depends from) should be withdrawn.

### **IV. Rejection of Claim 7 Under 35 U.S.C. §103(a)**

In the Final Office Action dated May 16 2008, claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kanevsky in view of Oohara, *et al.* (US 5,801,704), further in view of Kazama, *et al.* (US 6,111,580). Withdrawal of this rejection is requested for the following reasons. Claim 7 depends from independent claim 1. As discussed *supra*, Kanevsky *et al.* fails to disclose or suggest all features of amended independent claim 1. Kazama *et al.* relates to an input apparatus for detecting a user's action and for outputting operation

corresponding to the action, and fails to make up for the aforementioned deficiencies of Kanevsky *et al.* Accordingly, it is requested that this rejection with respect to independent claim 1 (and claim 7 that depends from) should be withdrawn.

**V. Rejection of Claim 8 Under 35 U.S.C. §103(a)**

In the Final Office Action dated May 16 2008, claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kanevsky in view of Oohara, *et al.* (US 5,801,704), further in view of Dempksi, *et al.* (US 7,007,236). Withdrawal of this rejection is requested for the following reasons. Claim 8 depends from independent claim 1. As discussed *supra*, Kanevsky *et al.* fails to disclose or suggest all features of amended independent claim 1. Dempksi *et al.* relates to a method for manipulating virtual objects on a video conference broadcast, and for outputting operation corresponding to the action, and fails to make up for the aforementioned deficiencies of Kanevsky *et al.* Accordingly, it is requested that this rejection with respect to independent claim 1 (and claim 8 that depends from) should be withdrawn.

**CONCLUSION**

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP397USA].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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